

**From:** Tong-Argao, Sania [Tong-Argao.Sania@epa.gov]  
**Sent:** 7/10/2017 9:13:53 PM  
**To:** Medina-Vera, Myriam [Medina-Vera.Myriam@epa.gov]; Buckley, Timothy [Buckley.Timothy@epa.gov]  
**CC:** Lindstrom, Andrew [Lindstrom.Andrew@epa.gov]; Strynar, Mark [Strynar.Mark@epa.gov]  
**Subject:** RE: Report Language for non-GenX PFAS

For consideration, here are my suggested edits to the language to convey the results for the 5 PFCs for which we do not have authentic standards. I think it's important to point out that EPA did not collect the samples but that NC DEQ did.

## Ex. 5 Deliberative Process (DP)

I think you're already planning to do this, but as for reporting the data, I'd recommend separating the GenX results from the estimated results for the other 5 PFASs. You can even put a footnote for each table presented with the info that surrogate standards were used for the 5 PFASs whereas the specific standard was used for GenX. It's good that you titled the concentrations as "predicted". You may want to discuss use of the term 'predicted' versus 'estimated'. I'm not sure which is more accurate.

**Side Note:** I happened to notice the "mx 178" tabs says "Final Predicated Concentration" vs. 'Final Predicted Concentration'. Pointing it out so that can be edited as necessary prior to providing data to NC DEQ.

Thanks,  
 Sania

**From:** Medina-Vera, Myriam  
**Sent:** Monday, July 10, 2017 4:29 PM  
**To:** Buckley, Timothy <Buckley.Timothy@epa.gov>  
**Cc:** Tong-Argao, Sania <Tong-Argao.Sania@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Strynar, Mark <Strynar.Mark@epa.gov>  
**Subject:** RE: Report Language for non-GenX PFAS

Tim,

I am not sure if the need all the data (including raw) or what is summarized on each file (example below) for GenX.

Calibration Curve		
	GenX (ng/L)	% Accuracy
Cal 10	10.6	105.5
Cal 25	23.8	95.1
Cal 50	49.1	98.2

Cal 100	97.2	97.2
Cal 150	161.1	107.4
Cal 200	191.8	95.9
Cal 250	251.1	100.4

Original Sample	GenX (ng/L)	Dilution for reanalysis	GenX (ng/L)
NC DEQ #1- LCFWSA	574.5	5	
NC DEQ #2 - CFPUA Sweeny	676.9	5	
NC DEQ #3 - CFPUA ASR well	558.6	5	
NC DEQ #4 - Wrightville Beach Well 11	26.5	NA	26.5
NC DEQ #5 - International Paper Raw	484.8	5	
NC DEQ #6 - International Paper Finished	468.2	5	
NC DEQ #7 - NW Brunswick WTP finished	595.3	5	
NC DEQ #8 - Pender County 421 WTP Finished	257.4	5	
DWR #1- Chemours Outfall	6814.9	20	
DWR #2 - Bladen Bluffs Raw water intake	456.4	5	
<b>Diluted Sample</b>			
20x diluted DWR #1- Chemours Outfall	1087.9		21,759
5x diluted DWR #2 - Bladen Bluffs Raw water intake	100.1		500.6
5x diluted NC DEQ #1- LCFWSA	125.8		628.8
5x diluted NC DEQ #2 - CFPUA Sweeny	145.3		726.4
5x diluted NC DEQ #3 - CFPUA ASR well	117.6		587.9
5x diluted NC DEQ #5 - International Paper Raw	140.5		702.7
5x diluted NC DEQ #6 - International Paper Finished	104.6		523.2
5x diluted NC DEQ #7 - NW Brunswick WTP finished	139.1		695.4
5x diluted NC DEQ #8 - Pender County 421 WTP Finished	53.9		269.3
Items in red exceeded calibration curve.			

Myriam Medina-Vera, Ph.D.  
Chief PHCB/EMMD/NERL  
Research Triangle Park, NC  
Voice: 919-541-5016  
Fax: 919-541-3527

---

**From:** Strynar, Mark  
**Sent:** Monday, July 10, 2017 4:21 PM  
**To:** Medina-Vera, Myriam <[Medina-Vera.Myriam@epa.gov](mailto:Medina-Vera.Myriam@epa.gov)>; Buckley, Timothy <[Buckley.Timothy@epa.gov](mailto:Buckley.Timothy@epa.gov)>  
**Cc:** Tong-Argao, Sania <[Tong-Argao.Sania@epa.gov](mailto:Tong-Argao.Sania@epa.gov)>; Lindstrom, Andrew <[Lindstrom.Andrew@epa.gov](mailto:Lindstrom.Andrew@epa.gov)>  
**Subject:** RE: Report Language for non-GenX PFAS

I have completed the GenX analysis results for the Weeks 1,2 and 3. I showed them to Andy Lindstrom and he and I both looked at the results. I agree with Myriam we have a hard road going to even give good estimates of the other PFECAs (right now 3 other than GenX). Find attached the results and the QA data from each week (spikes, blanks, calibration curves replicates) though they have changed from week to week. I can keep working on the estimates of concentrations of the other PFECAs but we will need to discuss this fully with the NC DEQ people.

The QAPP and SOP are still in progress.

Mark

---

**From:** Medina-Vera, Myriam  
**Sent:** Monday, July 10, 2017 4:15 PM  
**To:** Buckley, Timothy <[Buckley.Timothy@epa.gov](mailto:Buckley.Timothy@epa.gov)>  
**Cc:** Tong-Argao, Sania <[Tong-Argao.Sania@epa.gov](mailto:Tong-Argao.Sania@epa.gov)>; Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>  
**Subject:** RE: Report Language for non-GenX PFAS

Tim,

Mark is on a conference call right now. I talked to him about providing the data for GenX.

The other compounds seemed to be at a higher concentration with the caveat that there are no standards to compare and the results are an educated guess. I think it would be good if we could provide the data for the remainder of the compounds to NC once Mark is back and we have a discussion on how to interpret the results.

Myriam Medina-Vera, Ph.D.  
Chief PHCB/EMMD/NERL  
Research Triangle Park, NC  
Voice: 919-541-5016  
Fax: 919-541-3527

---

**From:** Buckley, Timothy  
**Sent:** Monday, July 10, 2017 3:46 PM  
**To:** Strynar, Mark <[Strynar.Mark@epa.gov](mailto:Strynar.Mark@epa.gov)>  
**Cc:** Medina-Vera, Myriam <[Medina-Vera.Myriam@epa.gov](mailto:Medina-Vera.Myriam@epa.gov)>; Tong-Argao, Sania <[Tong-Argao.Sania@epa.gov](mailto:Tong-Argao.Sania@epa.gov)>  
**Subject:** Report Language for non-GenX PFAS

Mark,

Can you help me with the appropriate language to use for the 5 PFCs for which we do not have authentic standards. Maybe something along the lines of:

Whereas we quantified the amount of GenX in water samples based on an authentic standard (name source), for 5 other PFASs, the amount in water samples was estimated based on a surrogate standard. This method of estimation was necessary because no authentic standard exists for these other PFASs.

[Provide table of surrogate and analyte]

Although we have a high level of confidence in both the identification of these PFASs as well as their concentration, our confidence is not as great as if we had access to an authentic standard.

Tim

Timothy J. Buckley, PhD  
Director of the Exposure Methods & Measurements Division  
National Exposure Research Laboratory  
109 TW Alexander Drive  
Research Triangle Park, NC 27711

Email: [buckley.timothy@epa.gov](mailto:buckley.timothy@epa.gov)

URL: <http://www.epa.gov/heasd/staff/buckley.html>

Phone: (919) 541-2454 (O); FAX: -0239

Ex. 6 Personal Privacy (PP)